

# STA201H1-Why Numbers Matter, Winter 2020

## Section: L0101

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**Class time and location:** Mondays 2pm-3pm & Wednesdays 1pm-3pm in **SS 1073**

**Course Website:** <https://q.utoronto.ca>

**Instructor:** Dr. Fode Tounkara

**E-mail:** [f.tounkara@utoronto.ca](mailto:f.tounkara@utoronto.ca)

**Office hours:** Wednesday 10-11:30 am in **HS 384**

**Teaching Assistants:**

**Office hours:** TBD in HS Building, 3<sup>rd</sup>Floor(381)

### Course Description

This course teaches non-science students the importance of quantitative reasoning to many different areas. It explores a variety of applications to such diverse subjects as economics, gambling, politics, poetry, graphics, music, medicine, demographics, sports, secret codes, and more, using only basic high school level mathematics combined with logical thinking.

**Exclusion:** This course is not open to first-year students, nor to students enrolled in any science Major or Specialist program

### Course Objectives

At the end of this course, students should be able to: 1) see the relevance of mathematical and statistical ideas to everyday life; 2) interpret quantitative information presented in a variety of forms, 3) evaluate the validity of quantitative claims, and 4) use quantitative reasoning and logic to make informed decisions.

### Resources

#### Course webpage

- Lectures notes are available through the learning portal at <https://q.utoronto.ca>.

## Textbook

- There is no required textbook
- **Strongly recommended**

**Quantitative Literacy: Thinking Between the Lines**, *3rd edition*, 2018, by Crader, Evans, Johnson, and Noell.

## Online Discussion Board

This term you will have the option to use Piazza for class discussion. If you decide not to use Piazza it will not disadvantage you in any way, and will not affect official University outcomes (e.g., grades and learning opportunities). If you choose not to opt-into Piazza then you can ask questions or discuss course material with the instructor or TAs during office hours. Be sure to read Piazzas Privacy Policy and Terms of Use carefully.

Take time to understand and be comfortable with what they say. They provide for substantial sharing and disclosure of your personal information held by Piazza, which affects your privacy. If you decide to participate in Piazza, only provide content that you are comfortable sharing under the terms of the Privacy Policy and Terms of Use. The Piazza system is highly catered to getting you course material help fast and efficiently from classmates, the TA, and the instructor. Rather than emailing questions, I encourage you to post your questions on Piazza.

**To sign up for the discussion forum go to the link:** <http://piazza.com/utoronto.ca/winter2020/sta201>

## Evaluation

### Grading Distribution

Grades will be calculated using two schemes. The final course grade will be the largest of these two grades.

Assessment	Scheme 1	Scheme 2
Class Participation	5%	0%
Group of Assignments	15%	15%
Midterm Test	30%	35%
Final Exam	50%	50%

## Participation (PollEverywhere)

**PollEverywhere** will be used to promote engagement and provide feedback on your understanding during classes as well as to provide you with credit on your lecture participation. Note that **PollEverywhere** participation is optional alternate grading schemes are available for students who do not wish to participate this way (see Grading Schemes 2). **PollEverywhere** questions will be asked during lecture. The proportion of questions you answer (starting the week of January 20) will determine the fraction of the available participation grade (5%) that you earn. There will be around 3 **PollEverywhere** questions per class. However, some classes will have more or fewer questions. **PollEverywhere** participation only requires that you try; you do not have to get the questions correct to earn this part of your course grade.

## Assignments

- Three equally-weighted assignments (To be completed independent)
  - A1 : Wednesday, February 5th, due 23:59
  - A2 : Wednesday, March 4th, due 23:59
  - A3 : Wednesday, March 25th, due 23:59
- Must be written as PDF files
- Must be submitted via **Crowdmark**
- **Late assignment submission will be subjected to a penalty of 5% per day late.**

## Midterm Test

- 75-minutes multiple-choice and short-questions test
- Wednesday February 12th, from 1:30-2:45 pm (provisional)
- The location and information on coverage will be posted on Quercus in advance.

## Final exam

- There will be a **2-hours multiple-choice exam**
- Scheduling by the faculty
- Information on coverage will be posted on Portal in advance

## Calculators

Non-programmable, scientific calculators are permitted on the test and exam. Calculators on phones and other devices equipped with remote access will not be permitted during the tests or final exam.

## Re-grading Policy

Any requests to have marked work re-evaluated must be made in writing within one week of the date the work was returned to the class. The request must contain a justification for consideration. Be sure to include your official name, student number and/or paper number for identification purposes.

## Missed Tests:

There are no make-up tests. For a missing test without a reason (U of T doctor's note) you receive a zero mark. With a valid reason your mark will be adjusted. If you miss the first test (or assignment), the second test (assignment) weight will be adjusted. If you miss the second test (assignment), its weight will be shifted to the final exam. (warning: difficulty increases from the first test to the final; final exam covers complete course).

## Tutorials:

There are no tutorials, but you can come for help to Stat. Aid Centre, PHB 381 (3 rd floor), before tests: date and time TBA. Some extra office hours before the final will be available.

## How to communicate with your instructor

- Questions about course material such as:
  - How do I do question 3.7 in the textbook?
  - When is the midterm?

should be posted on the discussion forums on Piazza. Questions can be posted anonymously (so that the author is anonymous to other students but not to the instructors), if desired.

- For private communication, such as:
  - I missed the test because I was ill.

e-mail your instructor, and include your full name and student number..

**Note:** I will only respond to e-mails you send me if they come from your e-mail account *@utoronto.ca*.

## University of Toronto academic integrity

You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic integrity at [http://www.governingcouncil.utoronto.ca/Governing\\_Council/policies.htm](http://www.governingcouncil.utoronto.ca/Governing_Council/policies.htm). If you have any question about what is or is not permitted in this course, please do not hesitate to contact your instructor.

## Students with Disabilities

I am committed to teach every student in this course. The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom, or course materials, please contact Accessibility Service as soon as possible at <https://www.utoronto.ca/accessibility>. Students who may need course adaptations because of disability are welcome to make an appointment to see me during office hours.

## Your responsibility

The course is designed to actively engage you in the course material. We hope you'll find the subject of statistics interesting, challenging, and fun, and an excellent opportunity to truly learn the material. In order for these sessions to be effective, preparing by learning about the week's concepts through the notes is essential.

## Course outline:

The following is a tentative schedule for the course:

Week	Topics	Important Reminders
<b>Week 1</b>	Introduction to the course, Review, Critical Thinking	
<b>Week 2</b>	Critical Thinking ( continued )	
<b>Week 3</b>	Analysis of Growth	
<b>Week 4</b>	Linear and Exponential	
<b>Week 5</b>	Personal Finance	
<b>Week 6</b>	Wednesday February 12th, 1:30pm-2:45	<b>Midterm:</b>
<b>Week 7</b>	Feb 17-21	<b>Reading week</b>
<b>Week 8</b>	Introduction to Probability	
<b>Week 9</b>	Statistics	
<b>Week 10</b>	Statistics (continued)	
<b>Week 11</b>	Graph Theory	
<b>Week 12</b>	Geometry	